العنوان: العوامل المؤثره فى مسار التحكم فى العمل : دراسه تحليليه و مقارنه
المصدر: المجلة الاردنية فى إدارة الاعمال (الاردن)
المؤلف الرئيسي: الشناق، رفعت
مؤلفين آخرين: الطاهر، عمار(م . مشارك)
المجلد/العدد: مج 8, ع 2
محكمة: نعم
التاريخ الميلادي: 2012
الصفحات: 373 - 389
رقم MD: 388547
نوع المحتوى: بحوث ومقالات
قواعد المعلومات: EcoLink
مواضيع: الاردن ، مستخلصات الابحاث ، اداء الموظفين ، الرضا الوظيفى ، الدراسات التحليليه، الدراسات المقارنه ، الصين ، نيوزلندا ، الدراسات الاقتصاديه
رابط: http://search.mandumah.com/Record/388547

*Jordan Journal of Business Administration*, Volume **8**, No. **2**, **2012**

# Factors affecting Work Locus of Control: An Analytical and Comparative Study

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## ABSTRACT

Work locus of control of employees refers to how employees believe that they can control work events. Individuals with high scores on the Work Locus of Control Scale developed by Spector are considered externals. Externals believe that external forces such as faith or luck determine events. Internals believe that they have more control over work environment and events. Major personality attributes influence organizational behavior. Locus of control attribute has been found to be a powerful predictor of behavior in organizations. Almost all related research has been conducted in Western English speaking countries. Relatively, few studies have investigated locus of control in other cultures. Most cross-national studies have been done in Confucian Asia, almost neglecting Arab countries. This study investigated a sample of Jordanian employees from three different local organizations through distributing, collecting and analyzing a questionnaire. The sample size was based on 50% proportion with a confidence level of 95% and an acceptable error of 0.07. The study examined the effect of some independent variables such as demographic variables among others on the employee work locus of control. A new independent variable was introduced which is related to employee religiousness. A focus group was formed to help develop the operational definition of this variable. Feeling religious and commitment to worship with a four points Likert type scale was used. The study indicated that a correlation exists between this new variable and work locus of control. Also the study showed that work locus of control for Jordanian employees ranked in the middle of the international norms. The sample scored 47 which is about ten points lower than the extremist Externals in China and ten points higher than the other extreme of Internals in New Zealand.

**Keywords**: Locus of Control, Organizational Behavior, Work Ethics, Personality Attributes, Job Satisfaction.

## INTRODUCTION

Rotter (1966) initially proposed the concept of Locus of Control (LOC) as an individual's perception of his or her ability to exercise control over the environment. Locus of Control refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high internal locus of control believe that events result primarily from their own behavior and actions. Those with a high external locus of control believe that powerful others, fate, or chance primarily determine events. Those with a high internal locus of control have better control of their behavior and tend to exhibit more political behaviors than externals and are more likely to attempt to influence other people; they are more likely to assume that their efforts will be successful. They are also more active in seeking information and knowledge concerning their situation than do externals. The propensity to engage in political behavior is stronger for individuals who have a high internal locus of control than for those who have a high external locus of control.

Major personality attributes influence organizational behavior. Some specific personality attributes have been found to be powerful predictors of behavior in the organization. The work ethic is believed to be related to

Received on 19/3/2009 and Accepted for Publication on 9/2/2012.

several individual difference variables. The first is related to where a person perceives the locus of control to be in his or her life. Rotter (1966) proposed that people with an external locus of control believe their rewards are controlled by outside or "non-self forces while those with an internal locus of control believe that their own actions control their rewards. The other variables are conscientiousness, machiavellianism, self-esteem, self-monitoring, propensity for risk taking and type of personality. Past research has suggested that a strong work ethic is associated with an internal locus of control (c.f Lied & Pritchard, 1976; Waters, Batlis, & Waters, 1975).

Locus of Control is defined as: “Some people belief that they are masters of their own fate”. Other people see themselves as pawns of fate, believing that what happens to them in their lives is due to luck or chance. The first type are those who believe that they control their destinies who were labeled internals, whereas the others who see their lives as being controlled by outside forces, have been called externals. A person’s perception of the source of his or her fate is termed locus of control.

A large number of researches comparing internals with externals have consistently shown that individuals who have high scores in externality are less satisfied with their jobs, have higher absenteeism rate, are more alienated from the work setting, and are less involved in their jobs than are internals.

Mental health studies have repeatedly shown control to be a major variable in mental health adjustment (Rotter, 1990). These studies validate that internal locus of control, i.e., actually having some influence on outer events, is positively correlated with good mental health. Muhonen (2011) found that there was no significant change in WLC during a two longitudinal investigations and explained that healthy women were characterized by stability in their WLC beliefs, rather than externality or internality.

The impact of locus of control on absence is an interesting one. Internals believe that health is substantially under their own control through proper habits. So, they take more responsibility for their health and have better health habits. Consequently, their incidents of sickness and, hence, of absenteeism are lower.

Chen & Wang (2007) found that Locus of control can significantly predict participants’ commitment to a specific change. In particular, they argued that relationship between locus of control and the three different components of commitment to change are differentiative: participants with more internal locus of control were more likely to have high affective and normative commitment to change, whereas participants with more external locus of control were more likely to have high continuance commitment to change.

Why are externals more dissatisfied? The answer is probably because they perceive themselves, having little control over those organizational outcomes that are important to them. Internals, facing the same situation, attribute organizational outcomes to their own actions. If the situation is unattractive, they believe that they have no one else to blame but themselves. Also, the dissatisfied internal is more likely to quit a dissatisfying job.

The overall evidence indicated that internals generally perform better on their jobs, but that conclusion should be moderated to reflect differences in jobs. Internals search more actively for information before making a decision and are more motivated to achieve and make greater attempts to control their environment. Externals, however, are more compliant and willing to follow directions. Therefore, internals do well on sophisticated tasks-which include most managerial and professional jobs- that require complex information processing and learning. In addition, internals are more suited to jobs that require initiative

and independence of action. Almost all successful salespeople, for instance, are internals. Why? Because it's pretty difficult to succeed in sales if you don't believe you can effectively influence outcomes. In contrast, externals should do well on jobs that are well structured and routine and in which success depends heavily on complying with the directives of others.

There is evidence that cultures differ in terms of people's relationship to the environment. In some cultures, such as those in North America, people believe that they can dominate their environment. People in other countries such as Middle Eastern countries believe that life is essentially preordained. Notice the close parallel to internal and external locus of control. We should therefore, expect, a larger proportion of internals in American and Canadian workforce than in Saudi Arabian or Iranian workforce.

Those with internal locus of control, which is a personality attribute, believe they control their own destiny. Those with external locus believe their lives are controlled by outside forces. Evidence indicates that internals perceive their jobs to be less stressful than do externals. When internals and externals confront a similar stressful situation, the internals are likely to believe that they can have a significant effect on the results. They, therefore, act to take control of events. In contrast, externals are more likely to be passive and feel helpless.

### 1.1 Purposes of the study

This study is meant to serve the following purposes:

1 Identify work locus of control of Jordanian employees.

2 Investigate some factors affecting work locus of control (LOC).

3 Introduce a new variable which is related to "feeling religious and commitment to worship" and to investigate its relation to work locus of control.

4 Compare work locus of control of Jordanian workers with others based on findings from the literature..

5 Set a base for more detailed future studies regarding the different aspects of this issue.

### 1.2 Significance of the study

The significance of this study comes from the fact that locus of control is one of the major personality attributes that influences organizational behavior. Importance of studying organizational behavior in this regard is becoming more essential due to the globalization and trade agreements that Jordan has recently signed. This is putting more pressure on Jordanian organizations and managers competing in the small village. Like many developing countries, Jordan is under a number of constraints deriving from the fact that it has insufficient natural resources; thus, we rely heavily on our human resources or "employees".

Work locus of control is very much affecting job satisfaction, absenteeism rate, job involvement and the suitability of a job. Chen & Silverthorne (2008) findings indicated that one aspect of an accountants' personality, as measured by locus of control, plays an important role in predicting in the level of job satisfaction, stress and performance in CPA firms in Taiwan. Individuals with a higher internal locus of control are more likely to have lower levels of job stress and higher levels of job performance and satisfaction.

This study is an attempt to measure work locus of control of Jordanian employees and to shed light on some of the variables that affect work locus of control among other purposes. In addition, the study can be considered a pioneering effort in this direction due to the very limited research that was carried out on LOC in the Middle East.

### 1.3 The Problem Statement

"What is the work locus of control of Jordanian workers? Which variables affect work locus of control? Does feeling religious and commitment to worship influence work locus of control? And; how is Jordan compared to other countries?"

### 1.4 Limitations of the Study

This research has faced the following difficulties:

- The unavailability of published research on work locus of control.
- The organizations studied in this project are considered prestigious organizations in Jordan and results may not be generalizeable.

## 2. Literature review

Samples of Iranian and U.S. managers were compared by Spector (2000) on four sources of job pressure (constraints, managerial role/tasks, home/work, and non-work support, five strains (job dissatisfaction, mental strain, physical strain, intention of quitting the job, and absence), and work locus of control. As expected Iranian managers were more external and were higher on pressure and on all five job strains. Americans showed higher inter-correlations among strains except for absence, whereas Iranians had higher correlations among sources of pressure. Relations between pressure and job strains were similar across both samples, and in both samples internal locus of control was associated with lower strain. Although marital status was not associated with job stressors and strains among Americans, it showed strong relations among Iranians. Stress in general and workplace stress in particular has been recognized as a major health problem in Western society, with estimated costs to society of hundreds of billions of Dollars per year. Many reviews can be found relating a variety of stressful job conditions or job stressors to a variety of employee health-related outcomes or job strains, both physical and psychological. However, almost all of this research has been conducted in the Western, English speaking world, predominantly the U.S. and U.K., and to a lesser extent Australia and Canada. Relatively few studies have investigated job stress in other cultures.

Most cross-national studies available have been done in Confucian Asian countries, such as China and Japan. Almost totally neglected are Moslem countries in the Middle East. The purpose of Spector's study was to contrast the experience of job stress of a typical American sample with their counterparts in the Middle Eastern country of the Islamic Republic of Iran (I. R. Iran). Compared to the U.S., I. R. Iran was characterized as being collectivistic and high in power distance. Iranians can be quite external in their locus of control, attributing control of events to forces outside of themselves. Control itself has been linked to perceptions of both job stressors and job strains. Research comparison of 24 countries found that at the country mean level, collectivism was associated with externality in locus of control. Furthermore, countries in which people were external tended to score high in job strains. Combining these findings with the general control literature, one would expect that Iranians would perceive less control. Because Iranians are more external than Americans, we would expect their perceptions of the workplace and their strains to differ.

In the USA. it has been well established that perceptions of job stressors is associated with reports of both attitudinal variables (job dissatisfaction and intention of quitting the job) and health strains (physical symptoms and psychological discomfort such as work anxiety). Western models of job stress suggest a causal process whereby exposure to job stressors induces strains. The extent to which these Western models fit

other cultures is open to question. In addition to the testing of the two hypotheses, the paper compared correlations between job stressors and strains to see if they were similar across our two samples. With work locus of control, the possible range was from 16 to 96, with the middle of the scale at 56. The U.S. sample was farther from the middle at 37.7 than the Iranian at 48. One further caution was noted with these data because they were all from a cross-sectional self-report questionnaire design. Certainly one cannot draw causal conclusions from observed relations in this study, so one cannot conclude that job stressors lead to strains in both countries. However, since the major variable of country was not assessed via questionnaire, the paper draw inferences that there were country differences, although as noted, the underlying mechanisms are not clear. Overall, results suggest that the underlying processes of job stress might be similar across both English-speaking Western culture and at least one Middle Eastern culture. (Spector, 2000)

The construct of academic motivation is multifaceted in that it is influenced by a number of social, situational and personality variables. The research conducted by Thomas (2000) explored several psychological constructs that are not typically linked to motivation theory. They are locus of control, self-monitoring, and responsibility. The research looks at how these variables may influence or mediate academic motivation. The study consisted of administering a battery of questionnaires: the Motivated Strategies for Learning Questionnaire (MSLQ), Student Personal Responsibility Scale (SPRS), Self-Monitoring Scale, and the Nowicki-Strickland Locus of Control Scale along with a demographic questionnaire. Preliminary results show that the constructs of locus of control, responsibility, self-monitoring, and motivation are related. The results show that responsibility is related to self-monitoring, intrinsic motivation, and locus of control. Students with an internal locus of control are also more responsible than students with an external locus of control.

Table (1) was developed by Spector (2002) and published on his web page: U.S. norms are based on 3969 people from 31 samples. Mean of samples is 39.9, with a standard deviation across samples of 10.0, and a coefficient alpha of 0.83.

**Table 1: International Norms for the Work Locus of Control Scale**

| Country | WLCS Score | No. of Samples | Total Sample Size |
|---|---|---|---|
| China | 57.1 | 1 | 247 |
| Bulgaria | 53.4 | 1 | 178 |
| Japan | 50.5 | 1 | 1990 |
| Taiwan | 49.5 | 1 | 345 |
| Spain | 49.4 | 2 | 407 |
| Iran | 49.3 | 1 | 289 |
| Slovenia | 49.1 | 1 | 496 |
| Poland | 48.0 | 1 | 267 |
| Estonia | 47.3 | 1 | 154 |
| Hong Kong | 47.8 | 3 | 862 |
| Brazil | 47.6 | 1 | 117 |
| Estonia | 47.3 | 1 | 165 |
| India | 47.0 | 2 | 291 |
| Romania | 46.5 | 3 | 567 |
| France | 45.0 | 1 | 62 |

| Country | WLCS Score | No. of Samples | Total Sample Size |
|---|---|---|---|
| Israel | 43.7 | 1 | 99 |
| England | 43.5 | 6 | 948 |
| Belgium | 43.4 | 1 | 186 |
| Jamaica | 43.1 | 1 | 143 |
| Australia | 42.0 | 3 | 550 |
| Sweden | 41.7 | 1 | 215 |
| Canada | 40.6 | 2 | 297 |
| Germany | 40.4 | 1 | 85 |
| US | 39.9 | 31 | 3969 |
| South Africa | 37.7 | 3 | 325 |
| New Zealand | 36.9 | 1 | 536 |

In the order from most external (top) to internal (bottom), scores that are close might not be significantly different. Keep in mind that in most cases the number of samples/subjects was limited, so the estimate of country LOC is likely not precise. Furthermore, samples are not always comparable, e.g., many of the single sample countries were from the CISMS study of managers and managers tend to be more internal than lower level employees. (Spector, 2002)

In a study of convergence/divergence of managerial values by Ralston (2000), four Western-developed measures (Machiavellianism, locus of control, intolerance of ambiguity and dogmatism) and the four dimensions of the Eastern-developed Chinese Value Survey (Confucian dynamism, human-heartedness, integration, and moral discipline) were the measures used. The findings indicate that often times both culture and the business environment interact to create a unique set of managerial values in a country. This study took a cross-cultural look at the values that managers hold. Within the data, there is some support for both the divergence and convergence views. However, the majority of the findings for measures developed with both Eastern and Western constructs supported the cross-vergence view. One important conclusion that this study points towards is that values must be viewed individually and not as a bundled entity. Some values may change while others do not. Some values may change more rapidly than other values. Other unique values may evolve from a combination of influences.

An article by Strauser (2002) started with that over the previous 10 to 15 years; research has suggested that our economy has undergone a shift from a production orientation to an emphasis on service and knowledge and a shift from task and volume to an emphasis on process and value. Rotter's (1966) theory of locus of control and Bandura's (1986) self-efficacy theory will also be reviewed as these constructs will be used to pre-rationalize work competency. Somllan et al. (2010) found that traits such as openness to experience, resilience, pragmatism, change self-efficacy, and locus of control influenced participants' perceptions of how they reacted to organizational change.

The study by Cook (1997) looked at few characteristics of community college students who were given the opportunity to choose between two different delivery modes online or traditional face to face (f2f) classroom instruction for a required post-secondary course. Locus of control scores, demographic variables age and off-campus access to a computer, and some additional descriptive statistics were collected for first year community college students taking a

communications course offered by two different delivery modes. It was predicted that students selecting an online delivery mode, which is portrayed as a more self-directed learning environment, would be more internally directed. The data from this small study did show a tendency toward an internal locus of control for the students who chose the more independent learning environment online course delivery.

The study by Bertolini et al. (2011) presents a multidimensional tax locus of control instrument developed based on a validated LOC instrument from the health-care field. It was found that older taxpayers are more likely to have an external LOC in tax situations, indicated by a greater propensity to defer decision-making to a tax professional, defined as a "powerful other." An additional finding was that taxpayers with more business exposure are less likely to defer to a tax professional.

### 2.2 Model of the Study

The following diagram shows the model of this with seven independent variables (Employee Gender, Employee Age, Employee Education, Employee Marital Status, Job Nature, Organization and Feeling Religious and Commitment to Worship) and one dependent variable namely Work Locus of Control.

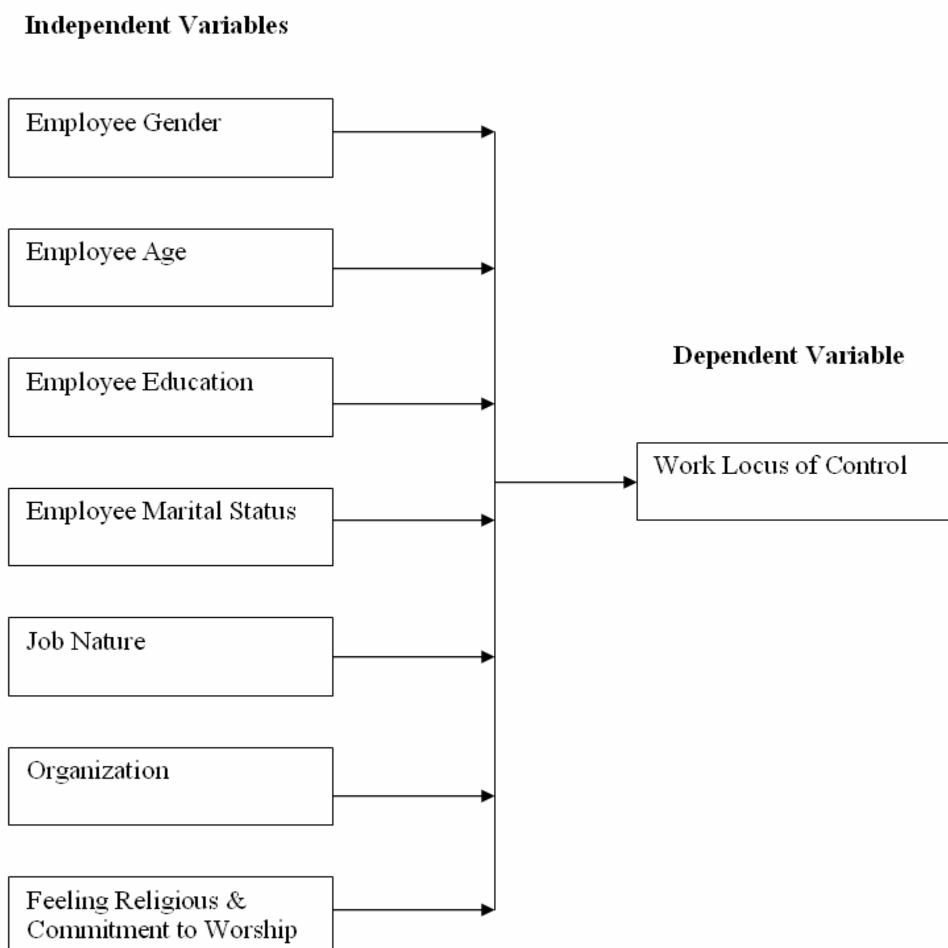



**Figure 1: Conceptual Model Factors Affecting Work Locus of Control**

**2.3 Variables of the Study**

The variables of the study were determined by:

- Surveying the literature survey.
- E-mail correspondence with Prof. Paul E. Spector /Department of Psychology / University of South Florida.
- A Focus group.

The variables were two kinds. Six independent variables and those were:

1. Employee Gender
2. Age
3. Education
4. Marital status
5. Job nature
6. Feeling religious and commitment to worship

in addition to one independent variable which is “work locus of control”.

**2.4 Operational definitions of the variables**

I: The independent variables are as follows:

1. Employee Gender: Male or Female
2. Age: In years and for the analysis, they were calcified into four categories: 20-29, 30-39, 40-49 and above 50.
3. Education: University education or no university education.
4. Marital status: Single or married.
5. Job nature: Supervisory or non-Supervisory.
6. Feeling religious and commitment to worship: A focus group of one Christian, one religious Muslim and one nonreligious Muslim was formed to define this variable. Less than 5% of the populations in Jordan are Christians. After discussion and many meetings it was agreed to use this definition with the scale mentioned earlier to measure religiousness of the worker for both Muslims and Christians.

II: The dependent variable: Work locus of control:

The work Locus of Control Scale developed by P. E. Spector was used.

The Work Locus of Control Scale (WLCS) is a 16 item instrument designed to assess control beliefs in the workplace. It is a domain specific locus of control scale which correlates about .50 to .55 with general locus of control. The format is summated rating with six response choices: disagree very much, disagree moderately, disagree slightly, agree slightly, agree moderately, agree very much, and scored from 1 to 6, respectively. Total score is the sum of all items, and ranges from 16 to 96. The scale is scored. So, externals receive high scores. Internal consistency (coefficient alpha) generally ranges from .80 to .85 in the English language version. Test-retest reliability for a year was reported as .60. The scale has been shown to relate to several work variables, including job performance and job satisfaction. It also relates to counterproductive behavior and organizational commitment.

**Instructions for Scoring the Work Locus of Control Scale, WLCS / Paul E. Spector:**

The Work Locus of Control Scale or WLCS has half of its items written in each direction--external and internal. Scores on the scale can range from 16 to 96. Each item can have a score from 1 to 6 if original response choices are used. High scores on the scale represent externality, so the scores on the internally worded items must be reversed before summing. This is because a score of 6 representing strongest possible agreement on an externally worded item is equivalent to a score of 1 representing strongest possible disagreement on an internally worded item. Below is the step by step procedure for scoring.

1. Responses to the items should be numbered from 1 representing strongest disagreement to 6 representing strongest agreement with each. This assumes that the

scale has not be modified and original response choices are used.

2. The internally worded items should be reverse scored. Below are the reversals for the original item score in the left column and reversed item score in the right. The rightmost values should be substituted for the leftmost. This can also be accomplished by subtracting the original values for the internal items from 7.

1 = 6 , 2 = 5 , 3 = 4 , 4 = 3 , 5 = 2 , 6 = 1

3. Internally worded items are 1, 2, 3, 4, 7, 11, 14, and 15.

4. Sum responses to all 16 items after the reversals from step 2.

5. If some items are missing you must make an adjustment otherwise the score will be too low. The best procedure is to compute the mean score per item for the individual, and substitute that mean for missing items. For example, if a person does not make a response to 1 item, take the total from step 4, divide by the number answered or 15, and substitute this number for the missing item by adding it to the total from step 4. An easier but less accurate procedure is to substitute a middle response for the missing items. Since the center of the scale is between 3 and 4, either number could be used. Usually one would alternate the two numbers as missing items occur. This is illustrated in the following table 2.

**Table 2: Work Locus of Control Scale**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Work Locus of Control Scale**<br>Copyright Paul E. Spector, All rights reserved, 1988 | | | | | | |
| The following questions concern your beliefs about jobs in general. They do not refer only to your present job.<br>1 = Disagree very much 4 = Agree slightly<br>2 = Disagree moderately 5 = Agree moderately<br>3 = Disagree slightly 6 = Agree very much | | | | | | |
| 1. A job is what you make of it. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. On most jobs, people can pretty much accomplish whatever they set out to accomplish | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. If you know what you want out of a job, you can find a job that gives it to you | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. If employees are unhappy with a decision made by their boss, they should do something about it | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. Getting the job you want is mostly a matter of luck | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. Making money is primarily a matter of good fortune | 1 | 2 | 3 | 4 | 5 | 6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7. Most people are capable of doing their jobs well if they make the effort | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. In order to get a really good job, you need to have family members or friends in high places | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. Promotions are usually a matter of good fortune | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. When it comes to landing a really good job, who you know is more important than what you know | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. Promotions are given to employees who perform well on the job | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. To make a lot of money you have to know the right people | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. It takes a lot of luck to be an outstanding employee on most jobs | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. People who perform their jobs well generally get rewarded | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Most employees have more influence on their supervisors than they think they do | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. The main difference between people who make a lot of money and people who make a little money is luck | 1 | 2 | 3 | 4 | 5 | 6 |

### 2.5 Hypotheses of the Study

The hypotheses of the study are:

1. H0: There is no difference in WLCS according to organization.
2. H0: There is no difference in WLCS according to Age.
3. H0: There is no difference in WLCS according to Education.
4. H0: There is no difference in WLCS according to Job nature.
5. H0: There is no difference in WLCS according to Marital status.
6. H0: There is no difference in WLCS according to Gender.
7. H0: There is no difference in WLCS according to Feeling religious.

## 3. Methodology of the Study

### 3.1 Population and Sample

Three well established organizations in Jordan accepted to take part in this research. These organizations were:

4 The Royal Scientific Society (RSS).

5 Royal Jordanian Airlines (RJ) Head office.

6 National Electric Power Company (NEPCO) Headquarter.

The Following table 3 indicates the number of employees in each organization:

**Table 3: Number of Employees in Organizations**

| | Organization | Number of employees |
|---|---|---|
| 1 | Royal Scientific Society | 693 |
| 2 | RJ head office | 500 |
| 3 | NEPCO Headquarter | 450 |

The sample size was chosen according to confidence level of 95% and an error of 0.07 and according to sample size determination for a proportion of 0.5:

$N_o = z^2 P ( 1 – P ) / e^2$

where: $N_o$ = number of items in sample

$z^2$ = square of the confidence level in standard error units

P = estimated proportion

$e^2$ = square of the maximum allowance for error between true

proportion and sample proportion.

Therefore, the required sample size is 196.

Based on the conditions of access, the initially negotiated percentage of respondents was restricted to 10% percent of total number of employees. However, a total of 300 questionnaires (over 18% of total population) were actually distributed equally to each of the participating organizations, which amounted to 100 questionnaires per organization. The questionnaire was administered by the appropriate officials within all three organizations. 215 filled questionnaires were returned in time. This means a response rate of about 68% which was considered a relatively high response rate. Only 196 questionnaires were used in this study.

### 3.2 Methods Used for Data Collection

The data collection was carried out as follows:

1. The covering letter from the University of Jordan addressed to the general manager of the studied organization and a sample questionnaire was hand delivered by the researchers. After approval and willingness for cooperation by the general manager, a meeting took place with the relevant official explaining to him/her the purpose and importance of the research study and one hundred copies of the questionnaires with envelops were handed over for distribution.
2. Weeks later and after many visits filled questionnaires were collected from the relevant official in each organization.
3. Valid replies were coded, tabulated and analyzed using proper methods of analysis in order to reach the final results and recommendations.

### 3.3 The Scales Used

In additions to the demographic variable which is straight forward to measure, two more variables were measured as follows:

1 Feeling religious and commitment to worship variable used a four points Likert type scale as shown below:

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Always | Most of the times | Sometimes | Rarely |

2 Work locus of control variable used a six points Likert type scale as shown below:

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Strongly disagree | Moderately disagree | Slightly disagree | Slightly agree | Moderately agree | Strongly agree |

### 3.4 Analytical Methods Used

In addition to descriptive statistics and comparison tables, the following statistical methods were used based on the objectives and hypotheses of the study:

- One way ANOVA and t-tests to find if difference exists in work locus of control depending on independent variables.
- Pearson correlation was used to measure the correlation between each of the independent variable and

work locus of control.

- Scheffe test to perform simultaneous joint pair-wise comparisons for all possible pair-wise combinations of means.

**4. Statistical Analysis**

**4.1 Hypotheses Testing:**

We tested our hypotheses according to the following decision rule:

Accept (H0) if the calculated value of t is lower than tabulated value, and significance level is higher than 5% and Reject (H0) if the calculated value is higher than tabulated value. The significance level is lower than 5%.

1. H0: There is no difference in WLCS according to organization.

Ha: There is difference in WLCS according to organization.

We used (ANOVA) to test this hypothesis and we found:

| F calculated | F tabulated | Significance F | Result of H0 |
|---|---|---|---|
| 0.3097 | 3.0 | 0.734 | accept |

We found that calculated F=0.3097 is lower than tabulated F, according to our decision rule we will accept H0 and reject Ha. There is no difference in WLCS according to organization.

2. H0: There is no difference in WLCS according to Age.

Ha: There is difference in WLCS according to Age.

We used (ANOVA) to test this hypothesis and we found:

| F calculated | F tabulated | Significance F | Result of H0 |
|---|---|---|---|
| 1.0478 | 2.60 | 0.3725 | accept |

We found that calculated F=1.0478 is lower than tabulated F, according to our decision rule we will accept H0 and reject Ha. There is no difference in WLCS according to age.

3. H0: There is no difference in WLCS according to Education.

Ha: There is difference in WLCS according to Education.

We used (t-test for independent samples) to test this hypothesis and we found:

| T calculated | T tabulated | Significance T | Result of H0 |
|---|---|---|---|
| 0.96 | 1.96 | 0.341 | accept |

We found that calculated T=0.96 is lower than tabulated T, according to our decision rule we will accept H0 and reject Ha. There is no difference in WLCS according to age.

4. H0: There is no difference in WLCS according to Job nature.

Ha: There is difference in WLCS according to Job nature.

We used (T-test for independent samples) to test this hypothesis and we found:

| T calculated | T tabulated | Significance T | Result of H0 |
|---|---|---|---|
| -1.06 | -1.96 | 0.292 | accept |

We found that calculated T=-1.06 is lower than tabulated T, according to our decision rule we will accept H0 and reject Ha. There is no difference in WLCS according to Job nature.

5. H0: There is no difference in WLCS according to marital status.

Ha: There is difference in WLCS according to marital status.

We used (T-test for independent samples) to test this hypothesis and we found:

| T calculated | T tabulated | Significance T | Result of H0 |
|---|---|---|---|
| 2.16 | 1.96 | 0.032 | reject |

We found that calculated T=2.16 is higher than tabulated T, according to our decision rule we will reject H0 and accept Ha. There is difference in WLCS according to marital status.

6. H0: There is no difference in WLCS according to Gender.

Ha: There is difference in WLCS according to Gender.

We used (t-test for independent samples) to test this hypothesis and we found:

| T calculated | T tabulated | Significance T | Result of H0 |
|---|---|---|---|
| 0.71 | 1.96 | 0.48 | accept |

We found that calculated T=0.71 is lower than tabulated T, according to our decision rule we will accept H0 and reject Ha. There is no difference in WLCS according to Employee Gender.

7. H0: There is no difference in WLCS according to feeling religious.

Ha: There is difference in WLCS according to feeling religious.

We used (ANOVA) to test this hypothesis and we found:

| F calculated | F tabulated | Significance F | Result of H0 |
|---|---|---|---|
| 3.3634 | 2.60 | 0.0197 | reject |

We found that calculated F=3.3634 is higher than tabulated F, according to our decision rule we will reject H0 and accept Ha. There is difference in WLCS according to feeling religious. When we use Scheffe test we found that there is difference between reply 1 and reply 2 and the highest WLCS is for reply 2 because it has the greatest mean of 49.6056.

The following table 4 shows the correlations between WLCS and the independent variables:

**Table 4: Values of Correlations between WLCS & the independent variables**

| Variable | Correlation coefficient | P |
|---|---|---|
| Age | - 0.0223 | 0.751 |
| Education | - 0.0667 | 0.341 |
| Job Nature | 0.0738 | 0.292 |
| Marital Status | -0.1499* | 0.032 |
| Organization | -0.0031 | 0.965 |
| Feeling religious | 0.1809* | 0.009 |
| Gender | -0.0495 | 0.48 |

* Significant correlation between variable and WLCS.

### 4.2 Comparative Analysis

The following table 5 shows relationships of the demographic variables with WLCS comparing three countries according to Spector (2000) and the findings of this research.

**Table 5: Relationships between Demographic Variables & WLCs for Three Countries**

| Variable | Gender | Age | College | Marital Status | Country |
|---|---|---|---|---|---|
| Work loc | -0.15 | -0.14 | -0.13 | 0.29* | Iran |
| | -0.13 | 0.05 | -0.06 | -0.03 | US |
| | -0.05 | -0.02 | -0.07 | -0.15 | Jordan |

The following table 6 shows the International norms for the Work Locus of Control Scale from Spector (2000) compared to the findings of this research for Jordan.

**Table 6: A Comparative Positioning for Jordan**

| Country | WLCS Score | No. of Samples | Total Sample Size |
|---|---|---|---|
| China | 57.1 | 1 | 247 |
| Bulgaria | 53.4 | 1 | 178 |
| Japan | 50.5 | 1 | 1990 |
| Taiwan | 49.5 | 1 | 345 |
| Spain | 49.4 | 2 | 407 |
| Iran | 49.3 | 1 | 289 |
| Slovenia | 49.1 | 1 | 496 |
| Poland | 48.0 | 1 | 267 |
| Estonia | 47.3 | 1 | 154 |
| Hong Kong | 47.8 | 3 | 862 |
| Brazil | 47.6 | 1 | 117 |
| **Jordan** | **47.3** | **1** | **196** |
| Estonia | 47.3 | 1 | 165 |
| India | 47.0 | 2 | 291 |
| Romania | 46.5 | 3 | 567 |
| France | 45.0 | 1 | 62 |
| Israel | 43.7 | 1 | 99 |
| England | 43.5 | 6 | 948 |
| Belgium | 43.4 | 1 | 186 |
| Jamaica | 43.1 | 1 | 143 |
| Australia | 42.0 | 3 | 550 |
| Sweden | 41.7 | 1 | 215 |
| Canada | 40.6 | 2 | 297 |
| Germany | 40.4 | 1 | 85 |
| US | 39.9 | 31 | 3969 |
| South Africa | 37.7 | 3 | 325 |
| New Zealand | 36.9 | 1 | 536 |

**5. Results and Recommendations**

**Results:**

This work can be considered as an initial step in studying the work locus of control of Jordanian employees as a personality attribute in order to improve employee selection and offer better stress management.

1- It was concluded that Gender, Age, Job status and organization of the employee have no effect on work locus of control for the three organizations studied. This finding is consistent with international research.

2- Marital status was found to influence work locus

of control with married employees being more external than singles.

3- A new independent variable was introduced and investigated. This variable through a focus group was defined as "Feeling religious and commitment to worship". It was meant to measure the level of religiousness for both Muslim and Christian employees in Jordan. The findings indicate that this new independent variable influences work locus of control.

Comparing estimated work locus of control for Jordanian employees to the international norms, one will find that Jordan scored 47 which is around the mean. Ten points below the highest 57 which is China (externals) and about ten points above the lowest 37 which is New Zealand (internals).

**Recommendations:**

Jordan lacks natural resources and depends heavily on its human resources. This makes it essential for Jordanian organizations to expend more efforts for understanding their employees in order to be able to survive in the new world order, free trade agreements and globalization.

Major personality attributes influence organizational behavior. The "Locus of control" attribute has been found to be a powerful predictor of behavior in organizations. More research is needed to understand local culture and its effect on work locus of control in order to properly manage Jordanian work force and organizations.

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# العوامل المؤثرة في مسار التحكم في العمل: دراسة تحليلية ومقارنة

***رفعت الشناق*  و  عمار الطاهر*****

## ملخـص

يقصد بمسار التحكم للموظفين بما يعتقده هؤلاء الموظفين من إمكانية تحكمهم بمجريات العمل. يعتبر الأفراد الذين يحققون تقديرات عالية على مقياس مسار التحكم المطور من قبل سبيكتر "أصحاب التوجه الخارجي"، أي أنهم يعتقدون بأن مؤثرات خارجية كالايمان والحظ هي التي تتحكم بمجريات نشاطات العمل. بينما يعتقد "أصحاب التوجه الداخلي" بأنهم أنفسهم من لديهم تحكم أكبر ببيئة العمل ومجرياته. تؤثر السمات الرئيسية للشخصية في السلوك التنظيمي، وقد وجد أن تأثير سمة مسار التحكم يعتبر عاملا قويا للتنبؤ بالسلوك في المنظمات. إن الغالبية العظمى من الأبحاث المتعلقة بهذا الموضوع تم القيام بها في البلدان الغربية الناطقة باللغة الإنجليزية. وبشكل نسبي فإن هناك عددا قليلا من الدراسات التي بحثت في موضوع مسار التحكم في الثقافات الأخرى. كذلك فإن غالبية الدراسات متعددة الجنسات عملت في آسيا الكونفوشيوسية (شبه القارة الصينية) وبأهمال شبه تام للبلدان العربية.

لقد أجريت هذه الدراسة على عينة من الموظفين الأردنيين العاملين في ثلاث مؤسسات محلية من خلال توزيع واستلام وتحليل استبانة معدة للغرض، حيث تم حساب حجم العينة على أساس نسبة 50% بمستوى ثقة يبلغ 95% وخطأ تقديري مقبول قدره 0.07.

اختبرت الدراسة تأثير عدد من المتغيرات المستقلة مثل المتغيرات الديموغرافية في مسار التحكم في العمل للموظف، وقد تم إدخال متغير جديد لم يتم التطرق له في دراسات سابقة وهو متغير التدين، حيث استخدمت الدراسة اسلوب المجموعة التركيزية للمساعدة في تطوير التعريف الإجرائي لهذا المتغير، وقد جرى استخدام عنصري الشعور بالتدين والالتزام بالعبادة على مقياس ليكرت بأربع نقاط. وقد بينت الدراسة بأن هناك ارتباط بين عامل التدين ومسار التحكم في العمل، وكذلك فقد أظهرت الدراسة بأن ترتيب مسار التحكم للموظفين الأردنين يقع في الوسط حسب الأعراف الدولية، حيث كان القياس هو 47 وهو أدنى بعشرة نقاط أقصى قياس لأصحاب التوجه الخارجي المسجل في الصين وأعلى بنفس القيمة من أقصى قياس لأصحاب التوجه الداخلي في نيوزيلندا.

**الكلمات الدالة:** مسار التحكم ، السلوك التنظيمي ، أخلاقيات العمل ، سمات الشخصية ، القناعة الوظيفية.

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تاريخ استلام البحث 2009/3/19، وتاريخ قبوله 2012/2/9.